REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested. Claims 1-41 are presently active in this case, Claims 17-39 being withdrawn from consideration, and Claims 1, 7, 13 and 16 amended and Claims 41-42 added by way of the present amendment.

In the outstanding Official Action, Claims 1-16 were rejected under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5, 822, 352 to Mizutani et al.

First, Applicants wish to thank Examiner Schillinger for the December 9, 2003 personal interview at which time the outstanding issues were discussed. During the interview, Applicants presented amendments and arguments substantially as indicated in this response. While no agreement was reached, Examiner Schillinger indicated that the "physical separation" limitation added to the claims by way of this amendment may distinguish over the cited prior art, which will be considered further by the Examiner upon formal submission of this amendment.

Turning now to the merits, Applicants invention is directed to a method of manufacturing a semiconductor element. As described in the background section of Applicant's specification, semiconductor elements are collectively formed on a semiconductor wafer that is divided into a plurality of regions by separation boundaries that will be used to physically separate the wafer areas into discrete components. In this prior art process, individual structures are formed with relatively high precision within each region of the wafer without crossing the separation boundary. However, when the semiconductor elements are actually separated, the actual separation plane may be misaligned from the separation boundary resulting in the structure of the element being inadvertently severed as shown in Figure 13, or misaligned on the element as shown in Figure 14. Applicant's invention is directed to mitigating this problem.

Specifically, Applicants independent Claim 1 recites a method of manufacturing a semiconductor element including forming a plurality of semiconductor elements on a semiconductor wafer such that two adjacent semiconductor elements define a separation boundary. Also recited is providing an integral semiconductor structure across these separation boundaries such that the integral semiconductor structure is common to the two adjacent semiconductor elements formed on the semiconductor wafer. Then, according to Claim 1, the two adjacent semiconductor elements are physically separated approximately at the separation boundary to form discrete semiconductor elements each having a portion of the integral semiconductor structure. As described in the December 9, 2003 interview, by forming the integral semiconductor structure across the separation boundary, the actual separation plane separates not only the semiconductor elements, but also the integral structure into discrete structures corresponding to each element. This provides a higher yield for manufactured semiconductor devices.

In contrast, the cited reference to Mizutani et al. discloses an optical semiconductor apparatus including a single substrate and at least two semiconductor laser portions each having a semiconductor laser structure and a current injection unit for independently injecting currents into the semiconductor laser portions. Thus, as discussed in the December 9th interview, Mizutani et al. discloses two laser portions that are integral to a single laser device. Indeed, Mizutani et al. does not disclose forming a plurality of semiconductor laser devices concurrently on a semiconductor wafer at all.

With regard Mizutani et al.'s reference to cleaving the semiconductor laser device, at column 10, line 64 to column 11, line 11, this portion of the cited reference discloses forming a "device separation groove 111" to electrically separate the injection electrodes for each portion of the semiconductor laser device. As seen in Fig. 1E, the separation groove does not physically separate the devices. The cleaving in Mizutani et al. is cleaving opposing sides of

the integral semiconductor laser device having the two portions. This is clear from the statement that "distances from the separation groove to the cleaved end facets are equal to each other," at colun 11, lines 8-9 of Mizutani et al. Thus, this portion of Mizutani et al. does not disclose providing an integral semiconductor structure across the separation boundary and physically separating the two adjacent semiconductor elements approximately at the separation boundary to form discrete semiconductor elements each having a portion of the integral semiconductor structure as now recited in independent Claim 1.

Thus, Claim 1 patentably defines over the cited reference to Mizutani et al. Moreover, as Claims 2-16 and 40-41 depend from Claim 1, these claims also patentably define over the cited reference to Mizutani et al. In this regard, Applicants note that Claims 40 and 41 have been added to vary the scope of patent protection in this case. Specifically, Claim 40 recites that the integral semiconductor structure comprises a partial diffraction grading, and Claim 41 recites forming a semiconductor element configured to emit light that has a plurality of oscillation longitudinal modes in an oscillation wavelength spectrum. In contrast, Column 1, lines 36-45 of Mizutani et al. states that "the semiconductor laser device of that reference is a DFB laser having a dynamic single mode." Thus, in addition to arguments made above with respect to Claim 1, Claims 40 and 41 further patentably define over the cited reference to Mizutani et al.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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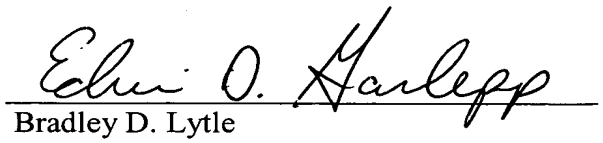

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